

IMPROVED SHAPED CHARGE AND METHOD OF USE

ABSTRACT

A shaped charge is formed having a pressed polymer pellet positioned between the explosive charge and the metal liner. The shock wave resulting from detonation of the explosive passes through the polymer to the liner. The collapse of the liner results in the formations of a jet – piercing the casing. The high-pressure gaseous by-products of the explosive force (inject) the polymer in the perforation “tunnel”. This shockwave will also start the decomposition of the polymer. The polymer will continue to decompose during its injection into the tunnel. As it is being injected into the perforation tunnel, the residue heat generated by the explosive combined with the shear and induced plastic flow, the polymer will ignite and burn. The burn time will be an order of magnitude greater the explosive; the pressure generated by the polymer will be an order of magnitude less than the explosive.